



Information for Healthcare Providers about Suspected Cases of Mumps

Mumps virus natural history

- Clinical case definition: an illness with acute onset of unilateral or bilateral tender, self-limited swelling of the parotid or other salivary gland lasting >2 days, and without other apparent cause.
- Virus transmission is via direct contact with respiratory droplets (i.e., coughing or sneezing), saliva or contact with contaminated fomites.
- Incubation period is generally 16-18 days (range 12-25 days).
- Maximum infectiousness occurs between two days before onset of parotitis and five days afterwards.

Notification and reporting

If you suspect a case of mumps, contact the Section of Epidemiology immediately at (907) 269-8000, or 1-800-478-0084 (after hours). Epidemiology staff are available 24 hours a day to assist in case consultation, to facilitate transport of specimens, and provide public health recommendations for managing a suspected or confirmed case.

Laboratory Specimens

Mumps PCR is the method of choice for rapid clinical diagnosis through the Alaska State Virology Laboratory (ASVL). ASVL will ship specimens by overnight service to a CDC contract lab in California for PCR testing. ASVL no longer performs culture for mumps virus. IgG antibody testing for immunity is available at ASVL (Table 1).

Specimen Collection

- A buccal swab is the preferred specimen. A throat swab may also be collected. Specimens should be collected using a Dacron® or other synthetic swab on a plastic shaft.

Swabs: use synthetic material swabs only – cotton or calcium-alginate tips and wooden or metal shafts are not acceptable.

- To collect a buccal swab: massage the parotid gland area (the space between the cheek and teeth just below the ear) for about 30 seconds prior to collection of the buccal secretions. The parotid duct (Stensen's duct) drains in this space near the upper rear molars.

Illustration of Parotid Gland and Instructions for Collection of Buccal Fluid is available here:

<http://www.cdc.gov/mumps/lab/detection-mumps.html> Place swab in a tube containing universal transport media (UTM) and ship to ASVL on cold packs.

Laboratory Request Forms

1. ASVL laboratory request form:

<http://www.dhss.alaska.gov/dph/Labs/Documents/publications/FbxSupplyReq.pdf>

Complete the patient and submitter information. In the Miscellaneous Viral Serology area, select Mumps, check patient is symptomatic. In the remarks box, write PCR testing.

Table 1. Specimens for mumps testing submitted to ASVL

Test	Mumps Virus
Testing Lab	Alaska State Virology Laboratory - Fairbanks
Disease(s)	Mumps, <u>Orchitis</u>
Organism(s)	Mumps Virus
Test Method	Serology (Mumps IgG Antibody) <ol style="list-style-type: none"> 1. This test is used to determine immune status. 2. The test is performed at ASVL by EIA. PCR (Mumps Virus Nucleic Acid) <ol style="list-style-type: none"> 1. This test is used to determine active infection. 2. Testing will be performed at a CDC contract lab.
Specimen	Serology <ol style="list-style-type: none"> 1. Serum <ul style="list-style-type: none"> • Collect in serum separator tube (SST – tiger top, marble top or yellow top with no additives) and centrifuge PCR <ol style="list-style-type: none"> 1. Buccal swab in Universal Transport Media (UTM). 2. Throat swab in UTM. (Swabs: use synthetic material swabs only – cotton or calcium-alginate tips and wooden or metal shafts are <u>not acceptable</u>)
Storage/Transport	Serology <ol style="list-style-type: none"> 1. Ship serum at room temp or on cool packs (4°C). PCR <ol style="list-style-type: none"> 1. Ship inoculated UTM to ASVL on cool packs (4°C). 2. ASVL will overnight the sample to the CDC Contract Lab.
Results	Serology <ol style="list-style-type: none"> 1. Negative <ul style="list-style-type: none"> • No significant level of detectable antibody. • Presumed to be susceptible to primary infection. 2. Equivocal = a borderline result <ul style="list-style-type: none"> • Result falls w/in $\pm 10\%$ of the positive threshold. • Resubmission may be indicated. 3. Positive <ul style="list-style-type: none"> • Indicates immunity by vaccination or infection. PCR <ol style="list-style-type: none"> 1. Not Detected <ul style="list-style-type: none"> • Mumps Virus nucleic acid was not detected. 2. Detected <ul style="list-style-type: none"> • Mumps Virus nucleic acid was detected.
Turnaround Time	Serology: 2-3 days from date of receipt at ASVL. PCR: 2 days from date of receipt at CDC Contract Lab.

- Detailed Alaska Public Health Laboratory information is available here:
<http://www.dhss.alaska.gov/dph/Labs/Pages/publications/default.aspx>